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CUTS IN CAPITAL EXPENDITURE

The irregularity of publication of White Papers on economic policy, though unavoidable, makes it difficult to see the different measures and statements in true perspective. It has always been a weakness of the National Income White Paper that investment figures were computed as a residual and given without a sufficient breakdown of the constituent elements. For a period of reconstruction this gap is particularly serious and it is to be hoped that future White Papers on National Income will give at least as much, and if possible more, data on capital expenditure, as the statement on ' Capital Investment in 1948 ' (Cmd. 7268) published early in December to show the Government's intentions to free resources for exports and more essential home supplies.

Like other statements on economic policy, it bears the mark of compromise, reconciling various departmental demands and differing views on policy. Many different criteria are used for cuts and expansions but as in its predecessors, there are signs of vagueness when it comes to measures which must be applied to achieve the targets. There is, of course, a wide field of public investment where the Government exercises more or less direct control, and more than half the space of the White Paper is devoted to cuts and rearrangements of investments in this publicly controlled sector. But we are not given any estimates of the share of this investment in total investment, either in money terms or in terms of manpower.

The overall picture of the contemplated changes in investment is given in Table I. The figures are taken from the White Paper, but the mid-1948 figures are interpolated and the 1938 figures represent rough estimates of the pre-war pattern.

These estimates require some comments. Firstly, it is not quite clear whether the rates of investment given for 1947 and 1948 make full allowances for changes in stocks. The White Paper seems to be mainly concerned with building and engineering work and may thus underestimate the true rate of home investment for 1947, nor does it give any hints about stockholding policy for 1948. If stocks not allowed for in the White Paper, have increased in 1947, and will and can safely grow at a slower rate in 1948, the White Paper contains a margin of safety. Resources freed by a lower rate of stock piling will become available in addition to the planned cuts in fixed investment.

In comparing pre- and post-war figures it should be kept in mind that 1938, which is used as a convenient base, was a depression year and that net investment in 1937 was 10 to 15 per cent higher, and further that the division between plant and equipment and 'other investment' in fixed capital is somewhat uncertain so that comparison over time requires considerable caution. The 1938 figure for gross investment in plant and equipment is probably too high, but even if it were put up to £200 million for a prosperous year such as 1937, it seems fairly certain that the current rates of real investment in plant and equipment are substantially greater than they were before the war and will remain so ever after the cuts at the end of 1948. That does indicate that at least some of the war-time arrears of replacement in industrial equipment are being made good while, at the same time modest additions—modest in comparison with re-equipment of the U.S.A. economy—are made to that part of the capital stock which is likely to have a quick effect on productivity. It is equally plain that building and civil engineering, including repair end maintenance work, were already in 1947 much below the pre-war level and will be still further reduced by the end of 1948.

Comparing mid-year rates of gross investment implied in the White Paper, it would appear that the effective reduction amounts to about £130 million, of which about two-thirds is likely to come out of constructional work and one-third out of engineering work. If the targets are to be achieved it must be assumed that part of the reduction has already taken place, for various reasons, between June and December 1947, but the greater part will have to be effected between January and June 1948, that is during the crucial period during which Marshall Aid will not bring substantial relief. Expressed in terms of manpower, the £130 million cut may be taken to be equivalent to just over 250,000 man-years. This estimate employs the usual pre-war conversion figure of £250 per man-year and inflates it by a 100 per cent rise in the average value of net output. The actual rise in costs is likely to have been greater, and to that extent the above estimate is too high. If the full

TABLE I

Estimated rate of Gross Investment in the U.K. (£ million)

	1938	*June 1947*	*June 1948*		*Dec. 1948*
			Now planned	*Original forecast*	
Construction	(555)[1]	850	(765)[4]	825	700
Plant and equipment	(170)[2]	610	(565)[5]	680	525
Ships, etc.	(45)[3]	90	(90)	95	95
Est. Gross Investment ...	770	1550	(1420)[6]	1600	1320
Est. Net Investment	320	900	—	(950)	—

[1] (From Cmd. 6520) Building and Construction, maintenance and repairs including Highways and Public Utilities.

[2] Plant and Machinery for private industry £120m. (Cmd. 6520), plus £50m. for the public sector.

[3] Based on Colin Clark's estimate for the first half of 1938.

[4] Allowing for a 10 per cent reduction in accordance with the manpower figures for house-building and other building and constructional work.

[5] The reduction below June 1947 affects mainly Road Vehicles.

[6] Cmd. 7268 : figure for average of 1948.

saving were made available for exports, manpower in the export sector would be increased by about 10 to 12 per cent of its present strength.[1] But leakages of the displaced labour are bound to occur. They may be relatively unimportant in engineering where workers will produce the same kind of product for export instead of for the home market. For building, the discrepancy between manpower savings and transfers to essential industries is likely to be greater in spite of the Control of Engagement Order. This applies particularly to labour employed directly in building and civil engineering work, and not so much to the industries supplying fittings, etc. As it is proposed to finish the stock of houses now under construction, the supplying industries, including cement and bricks, will not get much relief before the middle of 1948.[2] The main saving will therefore be in skilled or semi-skilled building workers, fairly evenly distributed over the country as a whole, except for the development areas where building will continue at a higher rate. For direct building labour we have official and semi-official figures to indicate the planned saving in manpower.

TABLE II

Employment levels of Building Labour 1947 and 1948

Employed in	*July 1947*	*June 1948*
House building	569,000*	525,000
Other building workers	375,000	315,000
Total	944,000	840,000

*The Economist, Dec. 6th, 1947.

The displacement of 100,000 direct building workers should, if pre-war ratios can be taken as a rough guide, lead to a saving in indirect labour in the supplying industries of about 60,000. This affords a confirmation of our previous estimate that the total manpower release resulting from the investment cuts is of the order of 250,000 man-years since the reduction in outlay on building and construction represents about two-thirds of the total money saving in investment.

2. A breakdown of the broad totals shows that the overall reduction is a result of a continued expansion in some fields and heavier reductions in others. Table III gives the various building and construction schedules: Group A represents building for public and private enterprise, Group B work for public and social services, and Group C housing. The latter yields 44,000 workers, while Groups A and B together release about 60,000 workers.

For plant and machinery or ships the White Paper provides no estimates of manpower economies but relates to savings in terms of critical materials, especially steel, or by the diversion of supplies from the home market to ex-

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[1] The manpower content of exports is on this calculation higher than the number recorded as working for export orders in the *Monthly Statistical Digest*. For 1938 compare Barna's estimate of 1,875 million persons employed for exports in the *London and Cambridge Economic Service*, 1946.

[2] Cmd. 7268, p. 4.

TABLE III

Man-power Economies in Building

	June 1947	*June 1948*	
Group A			
Industrial Building	116,000	106,000	—10,000
Agriculture, etc.	15,000	27,000	+12,000
Transport	17,000	10,000	— 7,000
Fuel and power	30,000	38,300	+ 8,300
Civil Aviation	2,500	1,700	— 800
Post Office	5,100	4,000	— 1,100
	185,600	187,000	+ 1,400
Group B			
Education	16,000	23,400	+ 7,400
Police, prisons, etc.	9,800	10,500	+ 700
Health	18,800	24,000	+ 5,200
	44,600	57,900	+13,300
Govt. financed building	18,000	17,000	— 1,000
Defence Services	13,100	12,700	— 400
Other building work	40,800	40,000	— 800
	71,900	69,700	— 2,200
Unallocated workers*	73,000	—	—73,000
Group C			
Housebuilding	569,000	525,000	—44,000
Total	944,100	839,600	—104,500

*The figures for 1947 exclude, those for 1948 include 73,000 building workers hitherto not thus classified. The distribution of this labour force over the various building projects in 1947 is not known.

ports. The home market will take about 50 per cent less road vehicles in mid-1948 than at the same period in 1947; for ships[1] the planned increment in output will go almost entirely into exports; machinery and plant for ' other industry ' will be switched and will deprive the home market by the middle of 1948 of about 10 per cent of its current supply rate, and by the end of that year of about 20 per cent. Fuel and power and public utilities will apparently yield little net saving as compared with 1947, but the original expansion plans have in almost all cases been scaled down or altered to satisfy more immediate and urgent needs. Agricultural machinery will be supplied in increased quantities to the home market to meet the demands for the expansion of home output. More agricultural machinery will in addition become available for exports since the steel allocation to the industry has been doubled in recent months.

Without knowledge of the inter-departmental negotiations about the least harmful reductions in capital expenditure it is precarious to comment on the individual targets of the compromise solution presented in the White Paper. Whether the planned increase in food production requires the stated increment in supplies of agricultural machinery depends among other things upon the degree of utilisation of existing machinery, the types of machinery needed, and the willingness to pool equipment. It is clear that the Ministry of Agriculture was in a strong position to press for additional allocations, both of building work and of machinery, and unless we know the assumptions on which estimates are based it is impossible to criticise them in detail. The same is true of housing and building work for other public services. Here prior decisions about the housing programme and the raising of the school leaving age to a large extent determine what can or must be done now. One may still doubt whether the cuts in governmental building programmes are not too mild and those for industry and engineering products too severe. There is, however, one consideration which might justify this arrangement: the release of engineering products swells the export stream immediately and directly without much inter-industrial transfer of resources. A scaling down of building work does involve considerable transfers and produces per unit of release smaller and later additions to exports.

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[1] Since this was written, it was announced that allocations of steel for shipbuilding will be cut by 20 per cent.

Apart from the assessment of individual targets, there are, however, some general points which must be taken into consideration in judging the proposed cuts.

First of all, the manpower figures of the White Paper are very incomplete. This is particularly obvious in the case of building and civil engineering. The number of workers engaged on repair, reconditioning and alterations given in the Monthly Digest is about 350,000 for June 1947, and even this figure excludes the considerable number of independent workers which are mainly employed on work of this kind. Nor does any reduction in the volume of maintenance and other small works in 1948 seem to be contemplated. Much of the work undertaken under this heading cannot claim high priority and it would have been logical to restrict it more severely than new building. Admittedly maintenance labour is likely to be less mobile, but it could well have been considered whether this part of the building labour force, suitably reorganised, could not be employed on the housing programme, freeing others to seek alternative employment.

Secondly, the axe has been applied where it was administratively simple to chop. This again can be illustrated by reference to building labour. The labour force engaged on new housing and war damage repairs is fairly closely controlled by public authorities through the system of building licences, raw material and manpower controls.

Repair work tends to be labour-intensive and to slip through the net of general physical controls. Nevertheless much of the work depends on paint, cement and timber. Reduced supplies together with stricter criteria in the granting of building permits on the Local Authority and Regional level should do something towards freeing resources in this sector. Freeing of resources is, however, not enough and some positive action is likely to be necessary to facilitate a transfer to more essential work. If the manpower of small businesses engaged on repair work is less mobile than other building labour, the former might be organised to help in new construction, thus freeing more mobile labour for other jobs. Moreover, as it is comparatively easy for a skilled building operative to become independent by doing repair jobs, cuts in the building programme carry the risk that labour will transfer from essential work on new building to less essential work of repairs. The setting up of new businesses in building, decorating, etc., might therefore again be made subject to licence and temporarily stopped, while at the same time manpower controls might help in combing out the existing labour force employed on repair jobs. Mere cuts are apt to create disguised unemployment *i.e.* to lower productivity. This danger of the restrictionist measures exists not only in building, but everywhere where repair services are important, as for instance in road and rail transport. Thus the abolition of basic petrol ought to free garage labour, but it is almost certain that the decline in the volume of work will be much greater than the freeing of labour; if the Government decides to abandon pool petrol or to widen price margins petrol distribution may actually attract labour instead of repelling it.

Thirdly, restrictions in capital outlay designed to relieve inflationary pressure should at the same time offer some opportunity for raising productivity. This sort of manpower saving is almost entirely neglected in the White Paper. There may be good reasons for this omission. The Government may treat improvements in productivity as windfall gains which would make up for the under-fulfilment of targets elsewhere, and it may have felt that productivity targets are too uncertain to be included in the White Paper. But as it stands the White Paper deals only with restricting the 1948 investment programme while our basic need is greater output. If it is correct that productivity was lowered during the last two years by the irregular flow of supplies, then the adjustment of constructional projects to the rate of supply of the scarcest material should reduce delays in production and to that extent increase productivity. But one might well go a step further. It is was politic to carry on a large volume of housing now in process of construction it might well have been stipulated that this should be completed with some manpower economies. As productivity in building is so much below pre-war a five or ten per cent improvement, given a steady flow of supplies, might have been aimed at, yielding a release of about 25,000 workers from the agreed housing programme. It would have needed further administrative effort to realise such a target, but, disregarding the productivity factor altogether may easily lead to a decline in productive effort. When building work is restricted, workers, like others, will tend to cling on and to fall back into the habit of spreading work. Thus by taking present productivity rates as given over a wide field of building and civil engineering work, the curtailment in capital expenditure has been made to contribute less to exports than it could have done.

Fourthly, to set lower targets is one thing, to distribute the reductions and to design measures of enforcement is another. The overall control of targets will, of course, be enforced by licensing and by the allocation of basic materials such as steel and timber. And some administrative machinery exists for allocating material to final uses (exports, essential home supplies, etc.). But it will not be an easy task to decide which industrial building projects now in the course of construction or which housing plans should be suspended. Here the Government wishes to make use of industrial associations, and enlist the knowledge of the trades to come to reasonable decisions, or in some cases even to leave it to them to ration out the various projects. This buffer between Whitehall and the individual business unit already operated before the war, and did so increasingly during the war. It is a common practice to discuss the operation of controls with the trade concerned and often to delegate detailed working and supervision of the arrangements to organised industry. Thus the working of the export target and its distribution between firms was often agreed with the trade, which thus took over semi-governmental functions. This intermediate layer in the operation of controls has considerable influence on their effectiveness and deserves closer study, which cannot be undertaken at present and from outside because of the very informality of the arrangements. But it does raise the more general problem whether the pre-war pattern of trade organisations is best fitted to carry this additional burden. Some amalgamation or some industrial grouping of associations would probably be desirable in general, and particularly from an administrative point of view, but it is clearly important when we move away from regulations applying to a particular industry to decisions about essential investment projects. They can neither be made independently by a Government Department nor by and through a host of trade associations, just because it is essential to judge relative importance over a wide field of industry. Since a discriminatory treatment of capital projects is inevitable at the present juncture, too great a multiplicity of trade associations each claiming a share will be a hindrance to a balanced curtailment.

Fifthly, it is of considerable importance to step up productivity in the repair services. They swallow a quite disproportionate share of the manpower in the capital goods industries. In present conditions, where outworn equipment must be maintained because new equipment is produced in insufficient quantities, this may be partly unavoidable, but as supplies of steel and other materials set limits to the amount of work which can be undertaken, a combing out of the repair manpower with the help of the industries and departments concerned would probably yield appreciable savings. If it is proposed that for road maintenance work the manpower employed by local authorities will be reduced by about one-quarter, one would think that similar economies could be obtained from the staffs employed by public utilities and Local Authorities.

Equally serious is perhaps the omission of another form of low-productivity investment : the hoarding of labour by firms in the hope of better days to come. Admittedly it is not easy to devise a cut and dried plan to make firms disgorge this labour; but since any transfer of such labour to productive work constitutes a double gain to the national economy, in the same way as manpower released from the forces, it would have been opportune to emphasise the importance of this wasteful investment and to enter into discussions with the various trade associations about ways and means of reducing this waste.

On the whole the planned restrictions announced in the White Paper are not unreasonable in themselves. They are not as sweeping as some economists had demanded, and were not meant to fill the whole export gap. They must be viewed in relation to other trimmings of our national expenditure. Set against the planned reductions of military expenditure the slowing down of the rate of re-equipment seems to be excessive, if present and short-period future welfare are taken as criteria. Less troops and more factories and houses or more exports would have quickened the readjustment. If we take the size of the armed forces as given, capital projects must be pitched against current consumption. No precise measure of the planned reduction in consumption is available. The import cuts announced last year have not yet been fully felt by consumers because stocks still act as buffers, and the diversion of consumer goods to exports will add to the burden falling upon direct consumption. These cuts will affect different lines of consumption in different ways. For an increasing number of household goods, shop shortages have given way to abundance, and it is here that fairly sharp cuts would probably be felt least. But since not all of these lines of goods are exportable it will depend upon the resolute use of available controls to switch over resources to the production of other goods. It is a serious weakness of the White Paper that it hardly contains a positive measure designed to increase productivity by better utilisation of existing equipment and of manpower, and that it does not pay sufficient attention to manpower economies outside the field of new construction, to positive measures for facilitating transfers, and to the dangerous tendency of labour hoarding in trade and industry. The Government is right to give priority to stopping the gap in the external balance through foregoing present welfare, but it is running the risk of doing too little about the crux of Britain's short term economic problem, namely how to raise a higher output from a given volume of equipment and a given labour force.

F. A. BURCHARDT.

SOME INTERNATIONAL ASPECTS OF THE STRIKE MOVEMENT

The first impression given by a comparison between statistics of labour disputes in different countries is that apart from the world-wide strike wave after the first world war, there is little international agreement; strike figures seem to differ completely in this respect from statistics of the economic development, business activity, employment, prices and so on. Yet a closer study reveals some common features.

This paper sets out to show the most important similarities and some of the differences in the general structure and development of national strike movements. It does not discuss the technical difficulties of international comparisons in this field.[1] Only such figures are used as seem fairly comparable.

In order to find out the national features of the strike movements, and their similarities and differences, one has to compare the relevant figures over a considerable series of years : one should compare them over a *common* period at least from the beginning of this century. But the available figures do not relate to the same periods. In two countries only (U.S.A. and Italy) statistics start as early as 1880; France followed in 1890, Great Britain in 1893, Germany in 1899, Canada in 1901, Sweden in 1903, and so on. On the other hand, in some countries statistics have been discontinued in the 'twenties or in the early 'thirties (Germany, Italy, partly in France). Furthermore they were interrupted in U.S.A. from 1905 to 1916,[2] and partly in Italy from 1904 to 1907. U.S.A. and German statistics are incomplete in an important respect (data on working days lost by disputes) until 1927 and 1920 respectively. There were, in addition, important changes made in the methods of compilation (statistics of ' results ' in U.S.A., several changes in Italy) which impair considerably the reliability of the time series. Discussion in this paper is accordingly limited to a few countries.

The Strength of the Movement and its Components

National statistics on labour disputes present yearly figures showing in a fairly similar way during recent decades :

(1) the numbers of disputes; (2) the numbers of workers involved in disputes; and in addition in some countries (3) the numbers of working days lost by disputes. The number of days lost is likely to be the most comprehensive indication of the strength of labour disputes in a particular country

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[1] It may also be that strike statistics are particularly unreliable and less significant than those in other fields (see K.C.G. Knowles : ' Strikes and their Economic Context ', BULLETIN Vol. 9, No. 9). It would, however, be even more complicated to assess the importance of these shortcomings for international comparisons than for investigations on a national scale.

[2] Figures for 1914 and 1915 were subsequently computed by the Bureau of Labor Statistics. The remaining gap was bridged by J. I. Griffin in his book *Strikes* (1939), pp. 118–132. He used the statistics continued during the interval by seven states (Connecticut, Kansas, Maryland, Massachusetts, New Jersey, New York and Rhode Island) to estimate nation-wide figures, assuming that the share of the seven states in them remained unchanged (47 per cent of the numbers of strikes, 38 per cent of the numbers of strikers) ; this method is very primitive but is sufficient to indicate the order of magnitude. The estimated figures serve, therefore, to complete the material for the following Tables and Charts.

during a particular year. If we analyse the number of days lost in a given period we find that it consists of three elements. If we call

the number of Disputes F (Frequency);
the number of workers involved W;
the number of days lost L,

then $\frac{W}{F}$ stands for the average *Magnitude* of Disputes which we may call M, $\frac{L}{W}$ for the average *Duration* (or perseverance) of Disputes which we may call P. L can be thought of as three-dimensional : $L=F.M.P.$

If, therefore, L gives an indication of the strength of the movement in a country during a given period, then F, M and P indicate the components of the strength, viz. Frequency, Magnitude and Duration of disputes.

Their study turns out to be more useful than the original figures enumerated above; the latter are not independent variables since the number of workers involved is a function of the number of disputes, and the number of days lost a function both of the numbers of disputes and of the numbers of workers involved : we shall find, however, that these figures retain some significance.

To make the figures presented by national statistics internationally comparable, we have to adjust them for the differences in the size of the countries concerned. One could do this by relating the figures to total population, or to the active population (gainfully employed). Since disputes in agriculture are, however, very rare and the ratio between industrial population and agricultural population varies widely from country to country, it is preferable to take only *industrial* wage earners into account.[1]

In the following Tables and Charts the numbers of disputes (frequency), the numbers of workers involved and of days lost are presented deflated by the *active non-agricultural population* in each country and in each year. It is true that in some non-agricultural groups labour disputes are also rare, or even non-existent, but it would be difficult to draw the borderline and, furthermore, it would not be easy to get homogeneous figures for the workers employed in these groups in all countries concerned through the whole period in question. On the other hand, the Censuses in all countries concerned provide fairly homogeneous figures giving the active non-agricultural population in the Census years; we get approximate figures for the years in between or after the last Census, by a rough linear interpolation or extrapolation. There is no need to deflate ' magnitude ' and ' duration ' which present the ratios between figures relating to the same country in the same year .

1. *General Comparison*

The most outstanding feature of Table I is that the numbers of workers involved in disputes (deflated in the way indicated above) are very similar in all the countries concerned on the annual average during the periods in question. This contrasts, particularly if we take the common period and exclude the years of general strikes of exceptional dimensions, strongly with the very large differences in the other columns; in frequency, magnitude, days lost, the highest figures are four times as high as the lowest, in duration three times as high.

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[1] Comp. Dale Yoder : ' Economic Changes and Industrial Unrest in U.S.A.', Journal fo Political Economy, Vol. 48, 1940, pp. 227–229.

TABLE I

The Strength of the Strike Movements

Annual Averages		Frequency (Numbers of Disputes per Mill. of act. ind. pop.)	Magnitude (Workers involved per Dispute)	Workers involved per Mill. of act. ind. pop. 000's	Duration (Days lost per Worker involved)	Days lost per Mill. of act. ind. pop. 000's
	1. *Whole period covered by statistics*					
United Kingdom	1893–1943	40	622	24.6	26.9	662
(without 1926)		(40)	(557)	(22.3)	(22.7)	(506)
France	1891–1935	64	291	18.6	16.4	305
Germany	1899–1931	97	272	26.4	—	—
Sweden	1903–1943	142	195	27.7	42.5	1179
(without 1909)		(142)	(155)	(22.2)	(43.6)	(963)
U.S.A.	1880–1941	84	317	26.6	—	—
Canada	1901–1943	72	263	18.9	18.1	342
	2. *Common Period* (*about 1901–1935*)					
United Kingdom	—	34	854	29.1	27.1	791
(without 1926)		(35)	(746)	(25.8)	(21.9)	(565)
France	—	69	306	21.1	16.9[1]	356*
Germany	1901–1930	100	283	28.3	—	—
Sweden	1903–1935	162	206	33.3	42.6	1420
(without 1909)		(162)	(164)	(26.5)	(42.3)	(1122)
U.S.A.	—	88	327	28.7	—	—
Canada	—	71	241	17.0	22.6	384

* The figures showing ' Days lost ' and ' Duration ' in France apply only up to 1930.

Nearly the same proportions of the Labour force went on strike in all the countries included in our investigation, on the yearly average of the last four or five decades; it appears therefore that strike proneness is not too different in industrial countries over long periods.[1] But there are nevertheless differences to be observed. The figures of workers involved (per active non-agricultural population) are larger in the United Kingdom, U.S.A. and Germany than in France and Canada; this seems to indicate that differences in the degree of industrialisation are not without importance. Sweden is, however, also included in the former group (even if the huge figures of the General Strike in 1909 are left out of account); differences in the organisation and tactics of workers and employers also play a part.

Since the numbers of workers involved (being the product of frequency and magnitude) are very similar, we can expect that the differences in magnitude are the opposite of those in frequency. The sequence of the countries with regard to the magnitude of their disputes is, indeed, the inverse of that in frequency (United Kingdom, U.S.A., Germany, Sweden); only the countries with smaller numbers of workers involved, France and Canada, fall somewhat outside the pattern. The United Kingdom represents the type with large but relatively infrequent, Sweden the type with frequent but small, disputes; in France and Canada disputes are both relatively small and relatively infrequent, in U.S.A. they are relatively large and frequent. This applies to our whole period and to most of the sub-periods (deviations from the pattern can often be explained by special developments). How can the different patterns of national strike activities be explained ?

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[1] The degree of international similarity is, of course, not the same in all sub-periods. For instance, participation in strikes in the United Kingdom is relatively very small in the years following the Taff Vale judgement (first decade of the 19th century), but relatively large in the post 1918 transition stage; in U.S.A., on the other hand, it is smaller than in Great Britain in this transition stage, but larger before 1914 and in the late 'thirties. But even these extreme differences are less considerable than in frequency, magnitude and duration.

At first sight, one is tempted to believe that the national statistics define the term ' one dispute ' differently; if the numbers of workers involved in disputes are nearly the same in two countries, and if several disputes in the same trade at the same time and for the same purpose were separately counted in one country, and only as one large dispute in the other, the international differences in frequency and in magnitude described above could perhaps be largely explained by differences in definition. If it were so, a better international understanding on the definition involved would be badly needed. But there is no indication that the differences in interpreting the term are so considerable from country to country that such differences in the figures could ensue.

It is sometimes assumed that the differences in the average magnitude of disputes are due to differences in the size of the industrial units in various countries. The sequence of the countries compared according to ' magnitude ' is not quite out of tune with this hypothesis : disputes are larger in Great Britain than in France and Canada, and larger in France than in Sweden on the average, but the figures for U.S.A. and Germany do not fit this explanation.[1] Moreover we shall find later on that the magnitude of disputes does not develop over time in accordance with the growth of the industrial units either in general, or in particular countries, though the 'magnitude' tends to grow in highly industrialised countries over the whole period.

It is very probable that the relations between frequency and magnitude of disputes (frequent but small, or large but relatively infrequent disputes) have, above all, something to do with differences in Labour organisation and tactics.

From the small international differences in the numbers of workers involved in disputes per million of the active non-agricultural population it follows, furthermore, that the numbers of days lost (weighted in the same way) come mainly from differences in the duration of disputes. The relevant statistical material is available for four countries only; but the strike movement in Sweden shows by far the highest number of days lost and by far the longest average duration; the loss of working days is smallest and the average duration shortest in France (and similarly in Canada), while Britain is in a middle position.

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[1] International differences in the magnitude of strikes are apparently also due to the different rôle which various industries play within each national strike movement. The extraordinary large overall average magnitude of British strikes in the 'twenties, for instance, is due to a great extent to coal strikes, the average magnitude of strikes in the other industries—though also large compared with other countries—being very considerably smaller. The large size of coal strikes is partly the consequence of large industrial units, but in Great Britain, also due to the national organisation of strikes in this industry during the period in question.

2. *The Trend*

Anyone who expects that the strike movement gains momentum—more or less—through the whole period for which we have figures, is certainly mistaken; nor do we find a continuously falling trend, or a rise, say, up to 1920 and then a fall. As far as there is any international trend observable, it changes several times through our period and, moreover, the trend is not the same for all components. It is of little use to compare linear trends through the whole period.

The development of national strike movements shows a very conspicuous agreement in two respects: the common violent rise round 1920, and the subsequent fall to a very low level in the 'thirties. The former is expressed in the frequency, magnitude and duration of disputes, the latter chiefly in frequency. In this period, the strike activity in all countries is strongly influenced by *international*—partly economic, partly political—factors:

In the first transition stage after World War I: economic expansion during the post-war boom, instability of prices lasting longer in some countries than in the others, the general belief that a new era had dawned for Labour (Russian Revolution, the creation of the International Labour Organisation), expressed in an unprecedented growth of Trade Union membership.

In the early 'thirties: bad economic conditions, above all mass unemployment on a scale hitherto unknown, and a changed Trade Union attitude as to the means of achieving better working conditions shown by the growth of the tendency to strike prevention. It has to be noted that a fall in the numbers of disputes had already started shortly before 1914.

Since economic fluctuations have in general an international scope and do not produce such a similarity of strike movements in other sub-periods, it seems very probable that the common political factors (post-war unrest and the subsequent strike prevention) are mainly responsible for the striking phenomenon of the big international strike wave.

One could break up the whole period into four sub-periods, in each of which there is a kind of international agreement in trend, at least in some of the components: (1) up to 1914 some increase in strike movements, but different behaviour of the component series; (2) a very distinct sharp rise up to the early 'twenties and a corresponding fall in the late 'twenties common to all countries and more or less to all components; (3) a low level in general—a very low level in some of the components—at the end of the 'twenties and the beginning of the 'thirties; (4) finally a certain partial tendency to rise again in the course of the 'thirties and 'forties. But it is not possible to define these sub-periods more exactly; their beginnings and ends do not coincide in different countries. Average figures for identical sub-periods are not significant enough to show the differences in development. The trends in different countries are, therefore, compared by presenting seven years moving averages, to eliminate—as far as possible—cyclical movements which will be dealt with in the next Section. This method is applied in the Charts and Tables contained in the Appendix.

The violent strike wave after World Word I is the most outstanding international feature in *all* the series. But it ebbed away and we have to take account of it when describing the trend only in so far as the subsequent level changed by comparison with the pre-1914 level.

Frequency (*Chart I*). Up to about 1908 the (*deflated*) numbers of disputes rose in the countries with a growing labour movement (U.S.A., France, Germany, Italy, but not in the U.K.). There was a temporary setback at one time or another in this pre-war period in most of the countries compared, due to measures or developments unfavourable to Labour.[1] Shortly before the outbreak of war in 1914 there is, however, already a common falling trend to be observed.[2]

In about 1920 the peak of the big strike wave was reached, the fall in frequency was, however, somewhat deferred in countries with drawn out currency difficulties (in Germany till 1922, in France till 1927). The very low level round 1930 is an international feature. There was not only an ebbing of the post-war strike wave, but the level was in all countries lower than before the war.

In the late 'thirties and early 'forties frequency started rising in many countries; it seems that unofficial strikes played a considerable part. It is still an open question whether the return of peace will turn the trend downward again.

Apart from this last phase, the frequency of strikes tended to fall in all countries over the whole period, perhaps with the exception of the United Kingdom where the trend is neither falling nor rising.

The *magnitude* of strikes (Chart II) taken over the whole period seems to be rising, especially in the highly industrialised countries.

[1] In Britain: the Taff Vale judgement (1901) greatly hampered the activity of Trade Unions by making them responsible for damages alleged to have been caused by the actions of their officers, and the numbers of disputes fell; this obstacle was removed by the Trade Disputes Act, 1906, and the Unions caught up with the temporary setback so that freqency rose up to the beginning of the war.

In U.S.A., a temporary setback in strike activity was caused by the fall in Trade Union membership which had reached a peak in 1887 (about 1 million); 'afterwards the losses suffered by Labor were so great that membership in the early nineties was probably little more than a few hundred thousand' (National Bureau of Economic Research: The Growth of American Trade Unions, 1880–1923) The rise in frequency was correspondingly interrupted.

In Sweden: a severe setback was caused by the failure of the General Strike in 1909; Union membership fell from 1908 to 1910 by almost half. There was a steep fall in frequency at the same time.

[2] This tendency is not only visible in 7 years moving averages (the low frequency at the beginning of the war distorting 7 years averages) but also in the original figures.

Up to 1914 we find no trend movement in any of the countries; it is striking that at this time the average size of disputes is nearly the same in all of them (about 200–300 workers per dispute). But after the big strike wave magnitude remained at a higher level, particularly in the United Kingdom, U.S.A. and Germany (in the United Kingdom the level was exceptionally high between 1912 and 1932, but fell considerably afterwards.)

The *duration* of strikes (Chart III) shows very large international differences in various sub-periods but is—apart from the rise during the big strike wave—distinctly diminishing in all countries with two exceptions: before 1914, duration is increasing in France, Italy and Canada, that is in countries with a growing labour movement (whereas it is decreasing in the United Kingdom also in this sub-period); secondly, in the late 'twenties and in the 'thirties, the development is quite exceptional in Sweden[1] where duration continued to increase enormously after the big strike wave and remained on a very high level at least till 1939.

The shortening of the average *duration* of disputes may be due to the recognition that protracted disputes are as a rule not very efficient weapons for the workers though there may be conditions under which this rule does not apply (Sweden in the 'twenties and 'thirties). The increasing *magnitude* of disputes may—as is frequently assumed—have something to do with the growing size of industrial units; there is, however, no trace of a strict correlation. More important is the organisation of disputes on a national scale. There are no great differences between the countries in the average magnitude of disputes, and the common level is comparatively low, before 1914. At this time, the possibilities and implications of General Strikes for improving the position of Labour were the subject of much theoretical discussion. Sweden was the only country in which it really happened, the General Strike in 1909 being ' proportionally the greatest labour conflict that had till then occurred in any country ';[2] it was defeated. In the inter-war period General Strikes became more frequent but their influence on average magnitude was not decisive (with the exception of the 1926 General Strike in Great Britain whose influence is shown in Table I. But very large strikes on a national scale played a larger part, and this makes for the higher average compared with pre-1914. The fall in the *frequency* of disputes can partly be explained by the increasing average magnitude (one big strike instead of several small ones) but to a much greater extent by strike prevention; the deep depression in the 'thirties may also play a part.

3. *Short Run Fluctuations*

If we want to compare the short run movements of strike figures with the general cyclical movement, the appropriate method which presents itself, and has been used for this purpose, seems to be to look for correlations, *e.g.*

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[1] A classification of strikes by duration and workers involved in them, given in official Swedish sources, show differences in detail but would seem to confirm, on the whole, our figures.

[2] H. A. Marquand and others : Organised Labour in Four Continents, p. 292.

with indexes of business activity, over the periods for which we have figures. But this method did not prove useful for investigations on a national scale. Dale Yoder, for instance, by comparing the numbers of disputes and of workers involved in U.S.A. with indexes of business activity came to the conclusion that 'no simple co-variation such as may be measured by linear correlation is observable '.[1] It seems even more hopeless to use this method for international comparisons.

By examining graphs presenting strike figures as deviations from 7 years moving averages (to eliminate the trend) and relating them to the trade cycle, above all to the peaks and trends in strike figures we gain the advantage that we are able to examine each cycle separately, instead of looking for over-all correlations through long periods which are not significant enough. The more interesting graphs are reproduced in the Appendix; the boom years are marked by vertical lines.

Among the five series, only *frequency* (Chart IV) follows fairly distinctly the cyclical pattern. This reaction is strongest in Great Britain, Germany and Canada, but there is a trace of it in the graphs for all the countries. This makes for a kind of international agreement in the short run changes of the frequency of disputes.

It is worth noting that as far as separate figures for strikes—in contradistinction to lock-outs—exist, the former follow the cyclical pattern more distinctly than the total numbers of disputes. Some countries did, however, not accept this classification, others abandoned it later for the reason that it is often not as clear as is generally assumed to which group a dispute belongs. But it is not this formal classification (whether it is employers or employees who start the dispute) but the material distinction whether the dispute aims at improving working conditions or at warding off their worsening, which matters most in this respect. Such figures as we have suggest—as could be expected—that disputes concerning wage decreases are at their peak during the downswing of the cycle when disputes concerning wage increases are going down. (The latter are generally more frequent than the former but in some years—for instance in U.S.A. after the boom of 1920 and 1929—the numbers of wage disputes consisted predominantly of defensive strikes.)

The changes in *magnitude* (Chart V) and in *duration* do not show the same agreement with the cyclical movement as those in frequency. There are mostly two high points, sometimes only one, within each cycle and they coincide only in a few cases with trade booms; they occur rather during the cyclical downward and/or upward movement. The years in which disputes are very large on the average are those in which national strikes break out in one of the big industries. In the United Kingdom and in U.S.A. these are often also years with a long average duration of disputes; in other countries the largest averages in magnitude and in duration fall rather into different years. In any case, the high points on the frequency graphs very seldom coincide with those in magnitude and in duration; the most outstanding

[1] Dale Yoder, loc. cit., p. 234.

exceptions fall into the big strike wave round 1920, during which the whole strength of the movement was gathered into an extraordinary effort.

Since frequency, magnitude and duration do—with rare exceptions—react differently to the course of the Trade Cycle, it is not surprising that its influence on their composites is small. There are still some traces of the cyclical pattern in the numbers of *workers involved*, in which frequency plays a large part. But even this last trace of any regular reaction on cyclical movements has gone in the numbers of *days lost*; there is no international agreement and (apart from the big strike wave) the peaks look entirely erratic.

The problem connected with the correlation between strike movements and economic (cyclical) changes has been so far to find out how the latter affect ' industrial unrest ' manifested by strikes. It has been taken for granted that, among the strike figures, the numbers of strikes and of workers involved are most likely to reflect them. Our observations suggest that frequency is, indeed, sensitive to the cyclical movements more or less in all countries but that its movements correspond more exactly as far as only aggressive strikes are concerned; the different behaviour of the frequency of defensive strikes is one of the reasons why a strict correlation is not to be expected with the numbers of *all* strikes. But the numbers of workers involved in strikes (aggressive and defensive) are less likely to correspond to the Trade Cycle since they contain an element following a different pattern *viz*. the magnitude of strikes.

Industrial unrest has not been strictly defined. But it seems that only the direct psychological reaction of the workers—in contradistinction to Labour tactics—on changing economic conditions is meant. In the following lines I attempt to show in a few outlines which of these factors determines the changes in each of the three components of the strike movement.

That the short run changes in the *frequency* of disputes follow to a certain extent the pattern of the Trade Cycle, could be explained in two different ways, by tactical considerations and by psychological reactions of Labour. One could mainly emphasise that times of prosperity present better opportunities for improving working conditions than times of depression. No doubt this is true; but it can be objected that very large disputes (mainly controlled by national organisations) do not follow the same pattern and it is not in or near the boom years that workers achieve in fact the best results by disputes. If there is a tactical element in the frequency of disputes it is the tactics of the rank and file, rather than of the leaders. Or, what comes perhaps to the same, frequent disputes are mainly caused by dissatisfaction among the workers ; strikes for improvements are frequent when rising prices are not adequately met by rising wages, strikes against a worsening of conditions when the workers are menaced by cuts and especially by wage cuts not justified by a proportional fall in prices. It is true that strikes are also infrequent when the labour movement is suppressed, or loses strength for political reasons, or when the tendency to prevent strikes is accepted by the Labour leaders. But, on the other hand, the most recent increase of frequency is probably due to the psychological reaction of the rank and file against the shortcomings of the official conciliation machinery. On the whole, the frequency of disputes depends less on deliberate Labour tactics than on the natural reactions of the workers to economic or political developments.

Changes in the *magnitude* of disputes, however, do not conform to the cyclical pattern. The best opportunities for large disputes in the main strike prone industries do apparently not arise out of general economic or political conditions but out of situations specific to these industries. Large strikes are in need of financial help from the united Labour movement; they are prompted by or supported for tactical considerations at the top. In contradistinction to frequency, the magnitude of disputes depends mainly on the tactics of the Labour leaders.

In protracted disputes, however, a psychological factor, the embittered mood of the workers or leaders, may also play a large part. Very large disputes of an extraordinary length occur when the attitude of Labour towards employers or towards the Government is particularly embittered, and when Labour feels bound to show its strength even if the opportunity is not good. We may conclude that normally the duration of disputes depends on tactics but largely also on a psychological factor which—as a rule—is *not* rooted in general economic conditions but in the political or personal background of the particular disputes.

K. Forchheimer.

APPENDIX

In the following Tables and Charts, seven-year moving averages of the main figures showing the Strength of Strike Movements in six countries for which statisticts are available are used. The figures showing Magnitude, Workers Involved and Days Lost are deflated by the non-agricultural active population (per million) in each year, to make them comparable. The distorting influence of General Strikes on moving averages is eliminated by inserting—instead of the actual figures of Magnitude, Workers Involved and Days Lost for Sweden in 1909, and for the United Kingdom in 1926, 1927 and 1928 (in the two years following the British General Strike those figures were exceptionally low)—arithmetical averages of the six adjacent years (3 years before and 3 years after the year, or years, in question). It should be kept in mind that the data on which these figures are based are not always homogeneous over time or strictly comparable as between countries. The moving averages, however, sufficiently indicate differences in the strength of the strike movement in various countries.

CHANGES IN FREQUENCY AND SEVERITY OF STRIKES.

	I. FREQUENCY						II. MAGNITUDE						III. WORKERS INV. (000)						IV. DURATION				V. DAYS LOST (000)				
Year	U.K.	France	Germ.	Sweden	U.S.A.*	Canada	U.K.	France	Germ.	Sweden	U.S.A.†	Canada	U.K.	France	Germ.	Sweden	U.S.A.§	Canada	U.K.	France	Sweden	Canada	U.K.	France	Sweden	Canada	Year
1893		39			92			229			269			9			23			16				138			1893
1894		39			83			203			285			8			23			16				128			1894
1895		40			75			176			283			7			22			16				118			1895
1896	52	46			76		342	183			301		17	9			23		43	16			751	150			1896
1897	51	48			78		229	181			315		12	9			25		39	16			475	152			1897
1895	48	49			88		214	191			272		10	10			23		39	15			418	160			1898
1899	45	50			101		215	234			256		9	12			24		39	16			393	210			1899
1900	40	50			117		228	250			254		9	13			28		39	17			379	231			1900
1901	35	58			124		221	260			234		8	15			28		34	18			294	269			1901
1902	31	63	96		130		209	259	90		219		6	16	10		28		28	18			172	286			1902
1903	29	70	113		138		229	272	93		201		6	19	11		27		28	18			175	354			1903
1904	28	73	119		147	109	224	259	95		176	163	6	19	12		26	18	28	18		19	164	349		376	1904
1905	25	80	121		136	102	280	242	98		165	177	7	19	13		23	17	29	19		19	216	346		337	1905
1906	25	85	124	210	127	93	295	206	100	114	161	191	7	18	13	24	21	17	27	18	37	24	208	331	963	390	1906
1907	26	96	136	198	121	82	368	202	105	105	165	191	10	20	15	24	20	15	28	18	35	25	267	358	1009	353	1907
1908	30	101	141	179	119	78	480	186	113	127	152	217	16	19	17	24	18	16	26	18	34	32	336	358	1022	483	1908
1909	33	104	140	167	121	82	664	190	109	115	178	232	25	20	16	21	21	18	25	18	28	33	640	352	743	551	1909
1910	41	101	129	143	117	79	665	171	113	117	202	248	27	17	15	20	24	19	25	16	29	34	692	265	714	595	1910
1911	43	93	118	115	108	65	689	183	109	124	216	245	29	17	14	18	24	16	27	15	32	39	751	247	716	581	1911
1912	46	82	107	84	115	62	693	183	112	114	236	221	30	16	13	14	28	15	21	14	28	36	685	227	485	521	1912
1913	46	73	97	90	120	63	699	179	175	111	270	225	31	14	13	13	33	15	20	11	26	31	682	188	396	460	1913
1914	48	64	76	130	123	66	704	213	324	109	274	238	32	14	15	14	35	17	17	10	28	29	645	148	372	479	1914
1915	49	52	59	186	125	74	682	241	408	90	306	260	33	14	15	17	39	20	17	8	27	21	608	110	440	372	1915
1916	53	62	66	215	126	83	724	289	459	104	425	290	41	24	26	24	53	27	14	8	27	21	547	260	627	520	1916
1917	54	70	78	248	123	94	834	361	492	133	446	278	50	36	34	36	55	28	13	10	32	19	669	496	1445	495	1917
1918	52	68	101	266	120	101	1117	446	526	136	479	279	61	39	44	39	56	29	16	10	33	17	1237	549	1615	527	1918
1919	51	74	135	293	106	103	1159	495	567	155	651	315	62	42	57	45	59	31	21	11	35	21	1368	593	1845	624	1919
1920	52	82	146	288	94	100	1174	521	611	213	660	339	63	45	68	52	55	32	24	12	42	23	1432	636	2414	650	1920
1921	51	86	156	262	77	92	1174	498	561	212	695	364	63	45	74	49	51	30	24	14	45	25	1453	661	2402	646	1921
1922	47	90	163	215	66	81	1156	486	521	287	690	348	59	45	76	56	47	26	26	14	45	30	1468	673	2480	674	1922
1923	40	85	138	190	53	61	1019	435	483	298	571	329	44	36	62	52	29	17	27	14	45	28	1273	540	2405	447	1923
1924	30	69	114	159	40	43	978	372	513	264	577	345	33	22	54	40	23	15	27	13	43	27	1142	289	1585	399	1924
1925	26	72	86	144	32	37	765	287	602	294	585	347	23	20	49	41	19	13	23	15	45	24	565	277	1731	339	1925
1926	25	77	54	123	31	35	801	252	621	277	423	308	23	19	37	36	13	11	20	14	47	20	470	263	1545	244	1926
1927	23	77	42	124	26	33	820	284	587	217	394	281	22	21	27	28	10	9	17	14	45	18	420	291	1005	205	1927
1928	21	68	32	117	24	33	852	268	522	234	380	229	21	19	17	29	9	8	17		47	16	405		1102	136	1928
1929	19	61		110	22	34	881	253		186	388	210	20	17		20	8	7	18		53	11	380		1119	75	1929
1930	19	46		104	24	36	809	259		182	446	196	18	14		18	11	7	16		64	12	331		1234	75	1930
1931	20	45		96	27	41	724	244		194	487	188	16	13		19	14	8	15		65	12	269		1256	95	1931
1932	22	41		87	32	42	666	239		168	492	201	14	12		14	18	9	13		62	12	215		929	97	1932
1933	24			77	36	45	545			166	499	213	12			13	19	10	12		72	11	167		907	103	1933
1934	29			62	50	55	496			221	514	220	13			14	25	13	11		69	12	160		892	142	1934
1935	32			54	56	57	387			239	489	221	11			13	26	13	10		67	10	120		782	138	1935
1936	36			43	62	57	301			207	498	241	11			9	29	15	8		68	10	83		560	136	1936
1937	40			35	64	59	288			189	432	262	12			7	27	15	7		55	8	82		307	133	1937
1938	45			30	72	60	289			178	398	281	13			6	29	17	7		55	7	83		259	124	1938
1939	49			32		71	271			154	359	288	13			5		21	7		54	7	79		206	131	1939
1940	55			38		82	270			152	383	334	15			5		30	5		38	6	77		181	167	1940

* For years 1883 to 1892 figures are respectively, 83, 70, 73, 78, 90, 101, 105, 100, 94, 94.

† For years 1883 to 1892 figures are respectively, 334, 333, 319, 305, 285, 263, 235, 209, 238, 269.

§ For years 1883 to 1892 figures are respecti vely, 21, 23, 23, 23, 25, 26, 25, 21, 22, 24.

Chart I FREQUENCY

Seven Year Moving Average

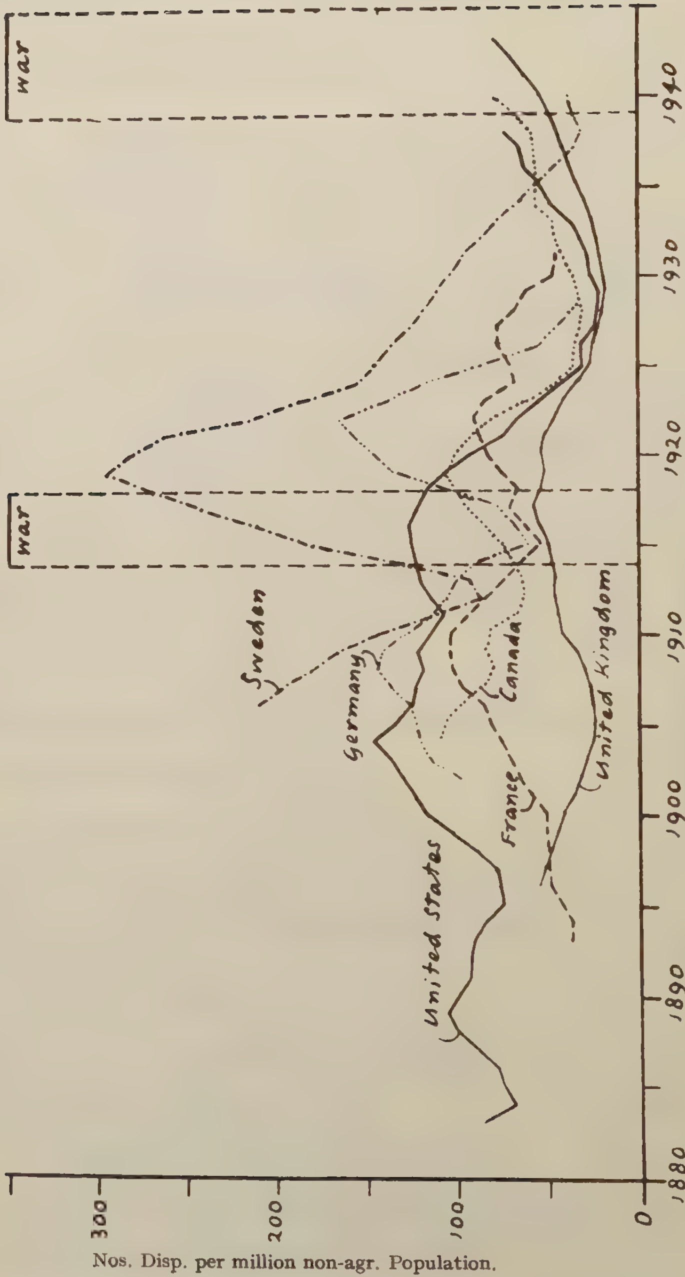


Chart II MAGNITUDE

Seven Year Moving Average

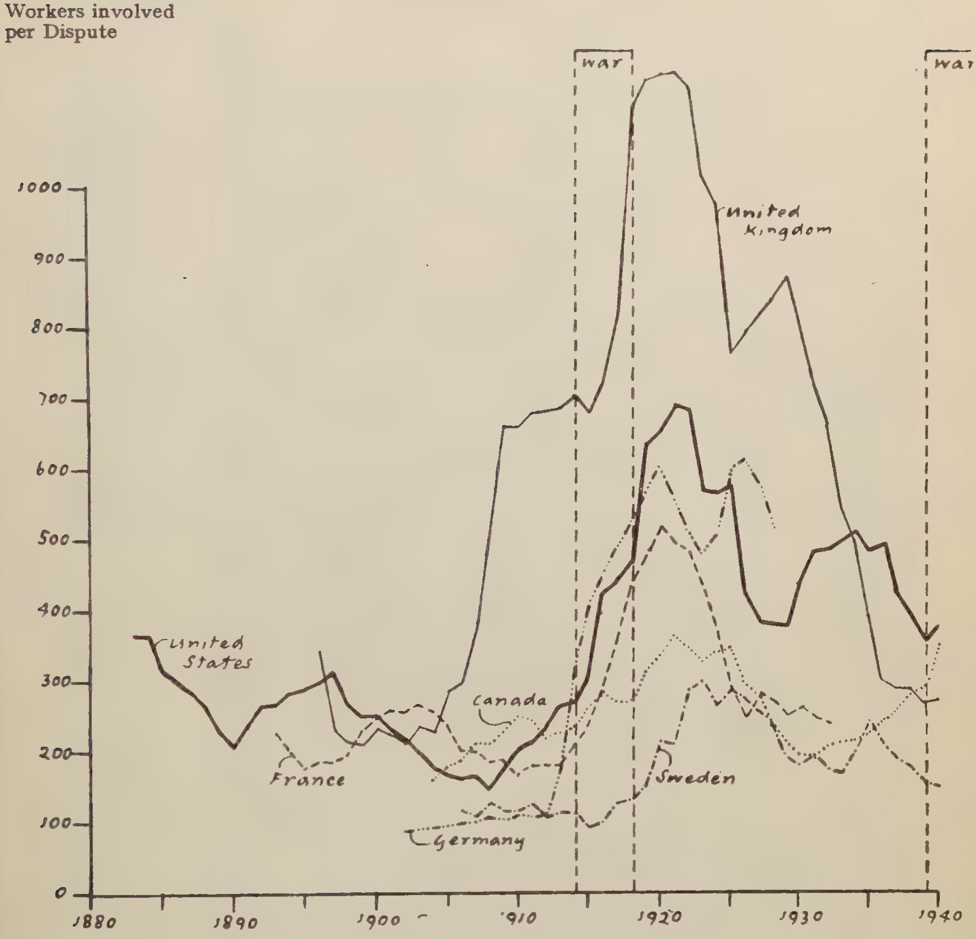


Chart III DURATION

Seven Year Moving Average

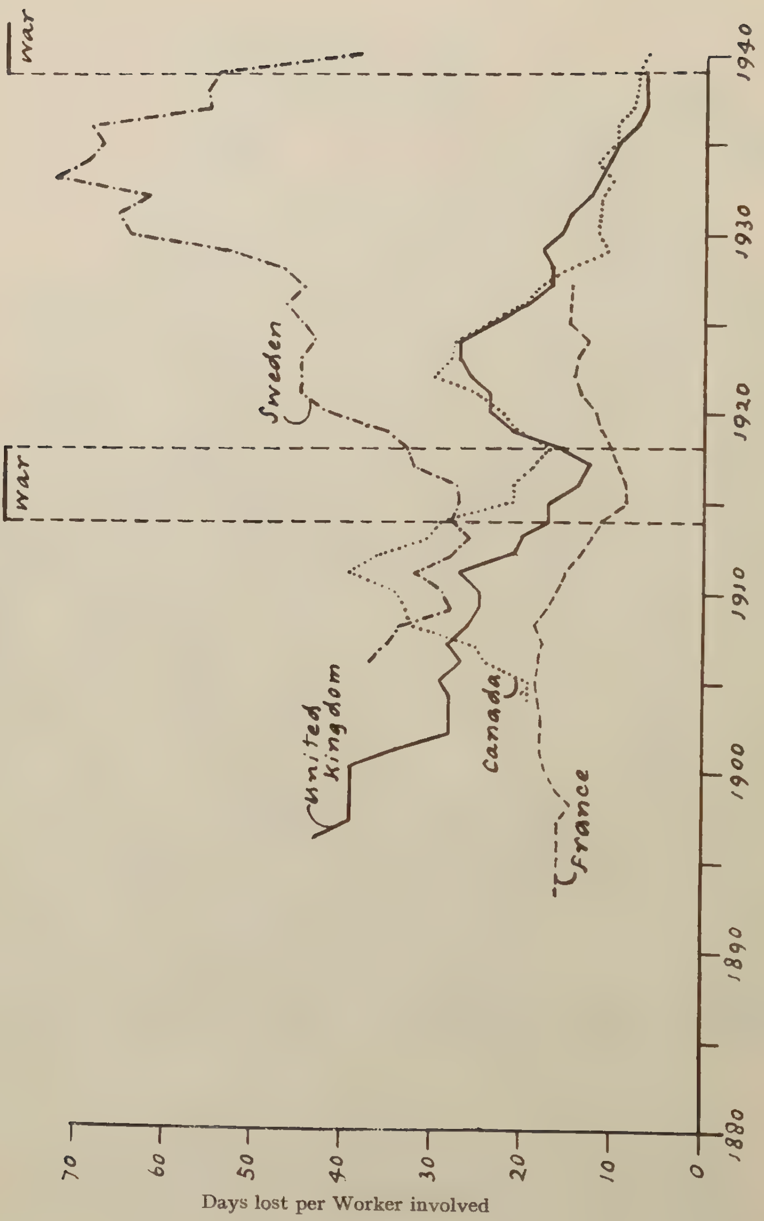


Chart IV FREQUENCY

Deviations from Moving Averages

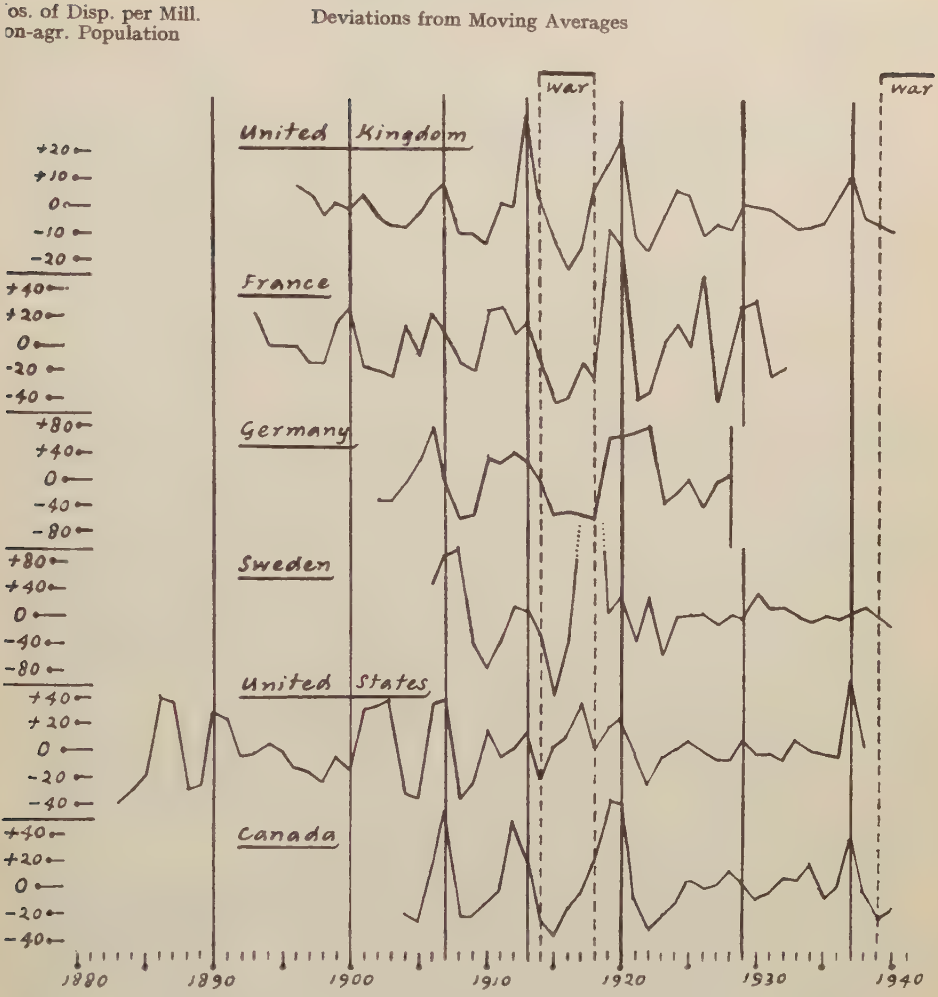
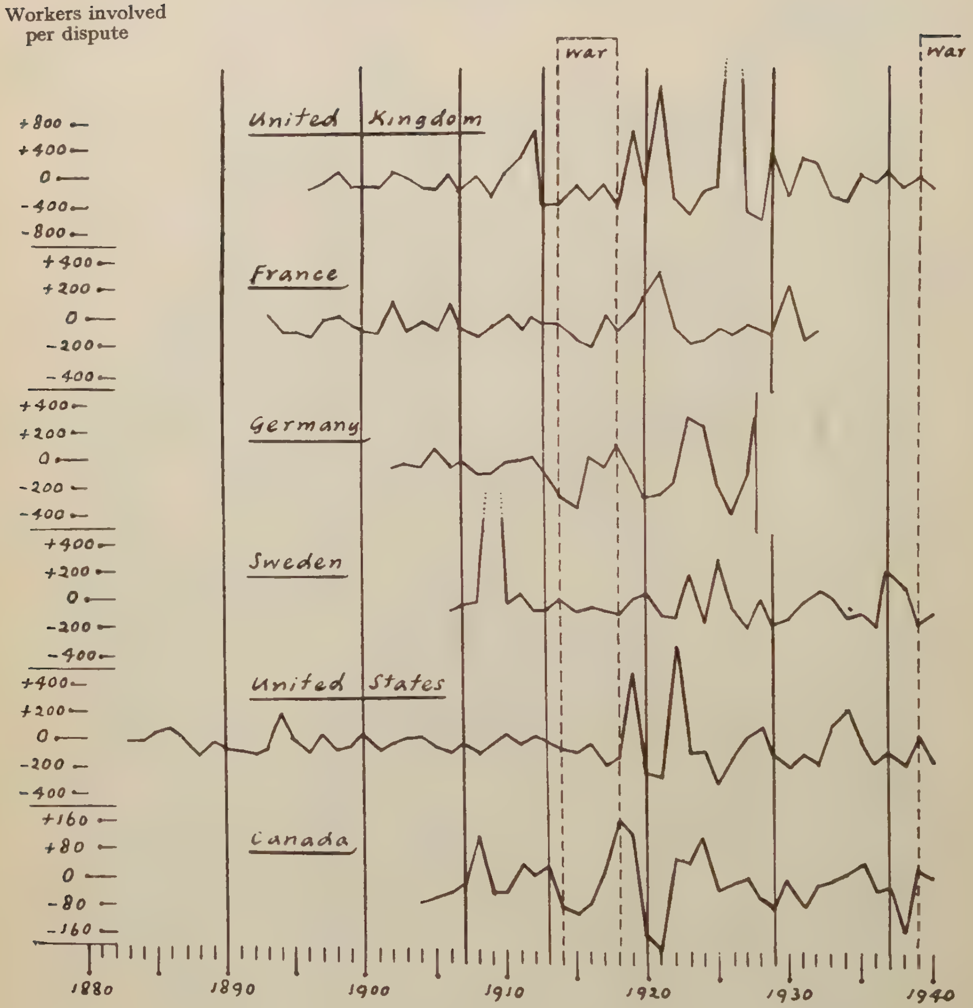


Chart V MAGNITUDE



TABULAR APPENDIX.

EDITORIAL NOTE

The following tables illustrate the economic developments in U.S.A. and individual European countries by presenting the trend of production, prices and foreign trade in recent months compared with typical war and pre-war years.

Explanation of symbols :

... the figure is not available.
( ) figures provisional or approximate.
— figure is negligible.

TABLE I. UNITED STATES

Index Nos. 1935–39=100[1]	Monthly Averages			1947					
	1941	1945	1946	May	June	July	Aug.	Sept.	Oct.
Personal Incomes, bill.$[2]	95.3	171.6	177.2	191.5	195.1	196.1	194.9	210.9	204.5
Consumer Expend., bill.$[3]	82.3	121.7	143.7	...	162.0	...	...	166.0	...
Dept. Store Sales—									
Value Index	133	207	264	291	289	287	282	291	275
Vol. Index of Farm Marketings[4]	115	138	138	126	138	167	152	172	...
Employment,[5] millions	35.7	38.1	39.0	42.0	42.3	42.1	42.6	43.0	43.3
Unemployment, millions	5.0	1.1	2.3	2.0	2.6	2.6	2.1	1.9	1.7
Building Contr. Awarded :									
Value Index	213	119	266	222	238	271	290	320	328
Vol. Index	183	86	168	126	130	145	154	167	170
Ind. Production Index :									
Durable	201	274	192	218	219	207	210	218	222
Non-durable	142	166	164	170	168	163	169	171	173
Minerals	125	137	136	151	148	140	150	153	154
Manuf. Orders—Index[6]	203	189	211	235	245	231	231	260	257
Manuf. Inventories :									
Index[7]	158	164	203	226	228	228	231	233	236
Wholesale Price Index :									
Farm Products	108	169	198	231	234	238	239	246	250
Foods	105	134	165	202	205	211	217	227	225
All others	110	123	135	163	163	165	168	171	173
Cost of Living Index	105	128	139	156	157	158	160	164	164
Facty. Av. Hourly Earngs. cts.	73	102	108	121	123	123	124	125	126
Imports, Total Mill.$	279	344	410	474	463	450	400	481	491
from Europe, Mill.$	24	...	66	58	69	72	64	77	...
Exports, Total Mill. $	427	820	812	1423	1242	1151	1143	1101	1226
to Europe, Mill.$	128	...	342	517	431	406	410	394	...

Sources: Bureau of the Census for Unemployment ; *U.S. Department of Commerce* for Income Payments, Consumer Expenditures, Farm Marketings, Manufacturers' Orders and Inventories, and Foreign Trade ; *U.S. Department of Labour* for Employment, Prices and Wages ; *Federal Reserve Board* for Department Store Sales, Building Contracts and Industrial Production.

[1] All index numbers, except those of prices and of manufacturers' orders, inventories and farm marketings, are adjusted for seasonal variations.

[2] Seasonally adjusted at annual rates.

[3] Quarterly figures, seasonally adjusted at annual rates.

[4] The monthly figures are no longer seasonally adjusted.

[5] All employees in non-agricultural establishments, unadjusted figure.

[6] Value Index deflated with the (Engineering News Record) Index of Construction.

[7] 1939=100.

TABLE II. UNITED KINGDOM[1]

	Unit	Monthly Averages			1947					
		1938	1945	1946	June	July	Aug.	Sept.	Oct.	Nov.
Production of :										
Coal (wkly. av.)	Mill. tons	4.4	3.5	3.6	3.9	3.3	3.3	3.8	4.0	4.3
Steel (wkly. av.)	000 tons	200	227	244	254	212[2]	234	266	275[2]	273
Cement	000 tons	643	338	548	586[2]	787[2]	613	628	817[2]	632
*Bricks	Millions	650	102	288	400	411	372	438	467	413
Passenger Cars	Thousands	28.0	1.4	18.3	29.3	24.9	20.8	28.4	26.2	23.6
Comm. Vehicles	Thousands	8.8	10.2	12.2	14.8	12.0	10.7	16.6	14.1	13.7
Merch. Vessels[3]	Mill. gr. tons	1.0	1.46	1.76	1.86	1.88	1.89	1.92	1.95	1.98
Electricity	000 mill. kwh	2.0	3.1	3.4	2.8	2.9	2.8	3.2	3.7	4.0
Gas (wkly. av.)	Mill. therm	31.9	39.1	42.4	36.7[2]	35.8	35.7	38.8[2]	42.8	47.4
*Perm. Houses[4]	Thousands	30.0	0.22	4.12	10.80	11.29	10.17	12.85	13.98	14.01
*Employmt. total[5]	Millions	17.9	16.3	17.3	18.4	18.6	18.6	18.8	18.9	18.9
*Manuf. Ind.	Millions	6.8	6.8	6.6	7.1	7.1	7.1	7.2	7.2	7.3
*Manuf. Expts.	Millions	1.0	0.41	1.31	1.51	1.52	1.58	1.72	1.84	1.91
*Unemploymt.[6]	Thousands	1688	103	359	272	256	250	240	259	268
*Ret. sales (wkly)	1938=100	100	116	137	147	149	143	157	169	180
Whole Prices :										
Food and Tob.	,,	100	163	163	171	173	172	169	172	172
Ind. Prod.	,,	100	169	178	196	200	202	206	211	214
Cost of Living[7]	,,	100	130	130	130	130	...	...	...	...
Retail Prices	June 1947=100	...	...	...	100	101	100	101	101	103
Wkly. Wage Rates	Sep. 1939=100	...	150	162	167	167	168	169	170	173
Ret. Imports	£ Mill.	77	92	108	154	179	174	161	161	138
U.K. Exports	,,	39	33	76	93	110	94	99	108	102
Terms of Trade[8]	1938=100	100	93	95	93	91	92	93	93	93

Sources: Monthly Digest of Statistics ; Ministry of Labour Gazette ; Board of Trade Journal.

[1] Figures for items marked * refer to Great Britain. [2] Average of five weeks.

[3] Tonnage under construction at end of period, 100 gross tons and over. [4] Completed.

[5] Including employers and self-employed, but excluding Forces, Auxiliary Services, Civil Defence, Police and private domestic service. All annual employment figures refer to mid-year.

[6] Number of insured workers registered as wholly unemployed or temporarily stopped. Mid-yearly or mid-monthly figures.

[7] Discontinued in July, 1948. [8] Ratio of export prices to import levels.

TABLE III. FRANCE

	Unit	Monthly Averages			1947					
		1938	1945	1946	June	July	Aug.	Sept.	Oct.	Nov.
Production of :										
Coal[1]	Mill m. tons	4.0	2.9	4.1	3.4	4.0	3.7	4.0	4.6	2.6
Electricity ...	000 Mill. kwh	1.5	1.4	1.8	2.0	2.0	1.8	2.0	2.2	...
Steel	Mill. m. tons	518	134	369	463	473	458	530	568	417
Cement ...	000 m. tons	296	127	281	355	336	306	358	365	...
Comm. Vehicles	Thousands	3.3	2.7	5.2	5.4	4.7	3.9	6.5	7.0	3.8
Passenger Cars	,,	15.2	0.1	2.5	4.8	5.1	4.1	7.3	7.6	4.5
Cotton Fabrics	000 m. tons	12.1	2.7	8.4	11.5	10.5	7.6	11.8	...	...
Building plans[2] ...	000 cbm	706	155	413	702	669	565	...	...	...
Wagon ldgs. (dly.)	Thousands	41	17	31	31	37	34	37	40	...
Unemployment ...	,,	373.6	15.8	15.7	6.7	6.1	5.8	5.7	5.7	...
Wholesale Prices	1938=100	100	375	648	904	888	1004	1096	1122	1204
Retail Prices[3] ...	,,	100	393	645	935	965	1068	1157	1268	1336
Imports	1000 m. frs.	3.8	4.6	19.5	29.9	29.3	26.6	29.4	30.4	29.4
Exports	,,	2.5	0.9	8.5	19.7	17.7	15.5	15.5	18.3	18.3

Source: Bulletin de la Statistique Générale de la France.

[1] Including lignite. [2] In Paris and 98 towns.

[3] Retail prices in Paris of 34 articles.

Table IV. BELGIUM

	Unit	Monthly Avs. 1939	1945	1946	1947 Apr.	May	June	July	Aug.	Sept.	Oct.
Production :											
Total Industry	1936–38=100	95	34	80	98	97	94	91	91	93	...
Coal	Mill. m. tons	2.5	1.3	1.9	2.18	2.08	2.01	1.86	1.83	2.00	2.14
Steel	000 m. tons	259	61	191	234	228	232	241	227	209	...
Cement	,,	213	54	158	217	236	198	252	240	222	...
Electricity ...	Mill. kwh	466	382	520	579	571	550	559	557	574	649
Textile Ind. ...	1938=100	113	38	92	117	104	109	102	97	108	...
Paper Ind.	,, ,,	120	26	109	135	130	135	124	120	136	...
Building Activity[1] ...	Thousands	2.2	1.1	2.4	3.2	3.9	4.4	3.2	3.4	3.4	...
Unemployment[2] ...	,,	195	145	67	51	45	46	55	49	45	49
Retail Prices ...	1936–38=100	106	329	334	331	332	334	338	352	353	359
Imports	000 mill. frs.	1.6	1.1	4.4	6.6	6.2	6.4	6.1	7.1	6.8	8.8
Exports	,,	1.8	0.3	2.5	5.3	5.4	5.8	5.8	3.9	6.1	6.2

Source: Institut National de Statistique ; Banque Nationale de Belgique.

[1] Number of units newly constructed and reconstructed.

[2] Daily of registered unemployed.

Table V. NETHERLANDS

	Unit	Mthly. Averages 1939	1945	1946	1947 May	June	July	Aug.	Sept.	Oct.
Production :										
Coal ...	000 m. tons	1072	424	693	779	829	891	802	898	922
Electricity	Mill. kwh.	223	93	225	244	232	245	237	276	333
Bricks ...	Millions	91	7.6	45.3	41.3	47.8	54.4	50.3	56.8	73.1
Cement ...	000 m. tons	45	21.2	33.6	54.4	52.0	58.8	49.0	52.9	56.4
Butter ...	000 m. tons	9	3.2	4.4	6.8	7.5	7.7	6.0	4.3	3.8
Cheese ...	000 m. tons	10.1	3.1	5.4	8.9	10.6	7.2	5.7	3.7	4.7
Unemployed[1]	Thousands	235.6	...	53.1	24.1	19.7	18.8	20.2	21.6	22.4
Retail trade[2]	1938=100	113	...	151	213	187	220	197	192	242
Cost of living	1938–39=100	101	...	...	200	203	200	197	200	198
Wage rates :										
Industry	1938–39=100	101	131	165	165	166	167	169	...	...
Agriculture	,, ,, ,,	100	225[3]	241	244	244	244	244	...	...
Imports ...	Mill. fl.	126	...	179	356	470	425	337	335	380
Exports ...	,, ,,	81	16	65	134	121	141	163	160	217

Source: Centraal Bureau voor de Statistiek ; Rotterdamsche Bankvereeniging.

[1] Registered wholly unemployed excluding public relief workers.

[2] Value of turnover of department and chain stores. [3] December.

Table VI. DENMARK

Index Nos. 1938=100	Unit	Monthly Averages 1939	1945	1946	1947 June	July	Aug.	Sept.	Oct.	Nov.
Production :										
Industrial[1]	Index	105	74	97	109	112	114	116	117	118
Animal prod.	,,	101	68	76	86	80	72	71	75	77
Butter ...	000 m. tons	15.2	11.0	11.7	13.7	12.9	10.8	9.2	9.5	8.8
Meat (pork)	,, ,, ,,	27.4	15.1	16.9	18.2	17.4	12.5	13.0	20.0	21.4
Electricity ...	Mill. kwh.	69[2]	76	88	96	88	114	116	130	140
W'sale prices	Index	105	190	188	205	210	210	210	210	213
Cost of living	,,	101	159	158	...	163	...	...	164	...
Imports ...	Mill. kr.	145	58	236	367	292	260	292	302	241
Exports ...	,, ,,	132	75	134	190	212	163	189	220	255

Source: Danmarks Statistics, Statistiske Efterretninger ; United Nations, Monthly Bulletin of Statistics. [1] Revised Series. [2] 1938.

TABLE VII. NORWAY

Index Nos. 1938=100	Unit	Monthly Averages 1939	1945	1946	1947 April	May	June	July	Aug.	Sept.	Oct.
Ind. Prod.	Index	106	69	100	114	123	122	79	120	120	122
Unemp'ymt[1]	Thousands	...	9.2	12.2	11.4	6.2	3.6	2.6	3.1	4.7	5.4
Elec. gen.	Mill. kwh.	851	820	938	942	928	934	851	854	811	910
Ret. turnover	Value Ind.	105	120	182	213	241	231	215	213	...	...
Cost of living	Index	102	156	160	161	162	161	161	159	158	157
Imports	Mill. kr.	114	100	183	347	316	385	295	275	420	354
Exports	,, ,,	67	27	100	131	171	239	144	143	181	162

Source: Central Bureau of Statistics.

[1] Employment Exchange Returns.

TABLE VIII. SWEDEN

Index Nos. 1939=100	Unit	Monthly Averages 1939	1945	1946	1947 May	June	July	Aug.	Sept.	Oct.
Ind. Production	Index	100	85	103	105	106	106	103	102	103
Ind. Employment[1]	,,	100	101	113	111	111	...	...	...	...
Unemployment[2]	Per cent	9.2	4.5	3.2	1.8	1.8	1.7	1.6	1.6	1.6
Steel Production	000 m. tons	99	100	101	110	95	65	92	94	104
Cost of living	Index	100	143	143	...	151[3]	...	...	154[3]	...
Imports ...	Mill. kr.	204	91	61	460	467	520	496	549	522
Exports ...	,, ,,	157	147	210	251	295	318	318	305	369

Source: Index, Svenska Handelsbanken ; Quarterly Review, Skandinaviska Banken ; United Nations, Monthly Bulletin.

[1] Including mining. [2] Percentage of trade union membership.

[3] Refers to end of quarter.

TABLE IX. SWITZERLAND

Index Nos. 1938=100	Unit	Monthly Averages 1938	1945	1946	1947 June	July	Aug.	Sept.	Oct.	Nov.
Employment :	Quart.									
All Industries	Index	100	110	123	131	...	...	134	...	...
Building ...	,,	100	89	108	129	...	...	135	...	...
Metal Ind.	,,	100	122	138	146	...	...	149	...	...
Chemical Ind.	,,	100	130	157	173	...	...	177	...	...
Textile ...	,,	100	76	87	95	...	...	98	...	...
Food Ind.	,,	100	106	120	126	...	...	130	...	...
Electricity gen.[1]	Mill. kwh.	448	666	696	750	787	765	649	590	...
Building permits :										
New Flats	Numbers	703	752	1043	1107	1295	1625	829	1191	2018
Factories[2]	,,	93	167	267	291[3]	...	...	289[5]	...	...
Tourism[4] ...	Thousands	630	264	506	839	1164	1536	859	459	...
Cost of Living	Index	100	152	152	159	159	159	159	162	163
Imports ...	Mill. frs.	134	102	285	379	413	361	386	441	481
Exports ...	,,	110	123	223	299	276	218	282	292	270

Source: Schweiz. Nationalbank ; Département Fédéral de l'Economie Publique.

[1] Public power stations. [2] Including extensions and structural changes.

[3] Monthly average, 2nd quarter. [4] Number of nights spent by foreign tourists in Swiss hotels. [5] Monthly average, 3rd quarter.

TABLE X. ITALY

	Unit	Monthly Averages 1939	1945	1946	1947 Apr.	May	June	July	Aug.	Sept.
Electricity Prod.	000 m. kwh.	1.3	0.9	1.3	1.5	1.8	1.8	1.8	1.7	1.4
Steel Prod. ...	000 m. tons	190	33	96	153	166	159	170	154	...
Coal Imports	000 m. tons	1100[1]	...	353[2]	642	903	1049	905	918	950
Unemployment	Millions	...	...	1.7	2.2	2.2	2.0	2.0	1.9	1.9
Cost of living	1938=100	...	...	...	4165	4370	4655	4801	5062	5334
Imports[3] ...	000 m. lire	0.9	...	...	38.7	38.7	39.1	45.5	...	...
Exports ...	,,	0.9	...	...	14.4	14.5	13.9	15.9	...	...

Source: Instituto Centrale di Statistics ; United Nations Monthly Bulletin of Statistics.

[1] Average 1935, 1937 and 1938. [2] Average April-December. [3] Including U.N.R.R.A.

TABLE XI. FINLAND

Index Nos. 1939=100	Unit	Monthly Averages 1939	1945	1946	1947 Apr.	May	June	July	Aug.	Sept.
Production :										
Home Ind.	Index	100	56	74	90	83	84	78	83	90
Export Ind.	,,	100	51	69	85	86	86	72	79	89
Electricity	Mill. kwh.	259	247	244	226	237	222	191	238	233
Cement (Consmp.)	Index	100	52	60	...	...	53	...	...	72
Wholesale Prices	,,	100	365	571	640	648	652	668	712	738
Cost of Living	1938–9=100	101	282	450	546	559	567	595	607	617
Imports ...	Mill. Mark.	631	572	2027	1463	3845	3939	4899	4021	5195
Comm. Exports	,,	643	436	1920	2101	4857	4583	5769	5498	4807
Reparation Deliv.[1]	,,	...	685	731	620	960	1129	798	827	1523

Source: Unitas, Quarterly Review of Trade Conditions in Finland; Monthly Bulletin Bank of Finland.

[1] Revised.

TABLE XII. POLAND

	Unit	Monthly Averages 1938[1]	1945	1946	1947 Apr.	May	June	July	Aug.	Sept.
Production :										
Coal ...	Mill. m. tons	3.2	2.0	3.9	4.7	4.5	4.6	5.1	5.1	5.4
Pig Iron ...	000 m. tons	74	21	61	68	73	71	75	83	77
Steel ...	,,	120	45	102	126	159	127	141	144	143
Cement ...	,,	143	33	117	134	151	160	174	158	153
Glass ...	,,	2.1	3.5	3.4	3.4	2.6	2.4	2.3	2.4	...
Paper ...	,,	17.1	3.4	12.4	16.5	18.0	17.6	18.6	19.1	...
Electricity	Mill. kwh.	319	418	476	508	495	494	512	535	535
Cost of living[2]	Index[2]	...	77[3]	96	129	135	144	142	140	138

Source: Central Statistical Office of the Republic of Poland.

[1] Pre-war frontiers.

[2] At Warsaw ; base : April 1945=100. The calculation is based on free-market prices supplied by the Municipality.

[3] Average April–December.

TABLE XIII. CZECHOSLOVAKIA

	Unit	Monthly Averages 1937	1945	1946	1947 April	May	June	July	Aug.	Sept.	Oct.
Production :											
Coal	000 m. tons	1398	952	1181	1371	1323	1242	1278	1196	1295	1471
Electricity	Mill. kwh.	334	341	464	527	527	514	492	524	553	616
Pig Iron	000 m. tons	140	48	80	116	124	123	120	120	119	125
W'sale.prices[1]	Jan.-Mar. 1939=100	...	154	284	294	295	295	301	302	303	307
Costof living[2]	1939=100	...	168	305	286	284	285	275	272	274	274
Imports	Mill. Kr.	915	76[3]	853	2262	2853	2693	2567	2537	2466	2523
Exports	,,	996	49[3]	1195	2452	2580	2479	2371	1916	2305	2669

Source: Zivnostenka Banka, U.N. Monthly Bulletin. Statistic Bulletin of Czechoslovakia.

[1] Bohemia, Moravia and Silesia ; from January, 1946, some products of Slovakia.

[2] At Prague. [3] May to December.

TABLE XIV. HUNGARY

	Unit	Monthly Averages 1938	1945	1946	1947 April	May	June	July	Aug.	Sept.	Oct.
Production :											
Coal	000 m. tons	87	58	60	81	83	81	89	86	96	99
Lignite	,,	693	343	466	599	613	580	618	598	649	735
Pig Iron	,,	28	2	13	26	28	28	27	28	29	28
Bauxite	,,	45	...	8	29	39	37	39	36	...	...
Petroleum	,,	3.6	58	57	51	51	48	49	45	43	44
Wagon ldgs.	Thousands	114	...	47	75	84	88	93	98	...	...
Cost of living	1937=100	101	...	...	431	425	476	388	383	411	484
Imports[1]	Mill. fl.	119	...	31	113	116	125	120	134	139	191
Exports[2]	,,	152	...	35	89	74	92	95	64	84	82

Source: Office Central Hongrois de Statistique.

[1] Excluding U.N.R.R.A. imports.

[2] Excluding reparation deliveries.

TABLE XV. BULGARIA

Index Nos. 1939=100	Unit	Monthly Averages 1939	1945	1946	1947 May	June	July	Aug.	Sept.	Oct.
Industrial Prod. :	Index	100	106	116	127	144	143	141	140	163
Investment Goods	,,	100	81	115	174	167	176	169	152	...
Food Ind.	,,	100	96	99	58	53	33	52	57	196
Other Cons. Ind.	,,	100	112	117	136	157	160	155	155	160
Electricity gen.	Mill kwh.	22	33	36	39	37	38	40	40	...
Wholesale prices	Index	100	550	627	685	687	694	694	699	708
Cost of living	,,	100	509	573	611	631	645	631	619	640
Imports ...	Mill. leva	433	485	1460	1093	1012	2260	1749	2928	1572
Exports ...	,,	505	1019	1245	1044	3093	1459	3131	1953	2411

Source: Direction Générale de la Statistique, Bulletin Mensuel (Sofia).

TABLE XVI. GERMANY : BRITISH ZONE

	Unit	Monthly Averages 1936	1946	1947 Mar.	April	May	June	July	Aug.	Sept.
Ind. Production :	1936=100	100	31	30	33	34	34	36	37	38
Prod. Goods[1]	,,	100	36	33	37	38	38	40	42	43
Cons. Goods	,,	100	21	22	23	23	24	24	23	22
Prod. of :										
Coal (daily)	000 tons	390	178	233	210	216	218	224	237	241
Steel	,,	1156	194	217	212	214	204	237	263	252
Cement ...	,,	445	107	71	124	159	147	136	151	...
Potash	,,	31	17.8	1.7	14.5	20.4	18.2	20.5	20.2	...
Cotton Yarn ...	,,	10.5[2]	1.7	2.4	2.4	2.4	2.5	2.7	2.8	...
Electricity gen. ...	Mill kwh	...	827	977	885	864	864	894	964	...
Imports Bizonal[3]	Mill. $	...	...	3.5	4.1	2.2	1.3	1.7	3.1	...
Exports Bizonal[4]	,,	...	...	11.4	13.8	15.1	12.9	22.4	18.4	26.3

Source: Statistical Bulletin of the Control Commission for Germany (British Element).

[1] Incl. investment goods (iron and steel, foundry products, vehicles, building materials, etc.) and producer goods for general requirements (coal, oil, gas, electricity and chemicals).

[2] Incl. some staple fibre.

[3] Excl. deliveries paid for by appropriated funds.

[4] Incl. invisible exports.

TABLE XVII. AUSTRIA

	Unit	Monthly Averages 1937	1946	1947 April	May	June	July	Aug.	Sept.	Oct.	Nov.
Prod. of :											
Coal ...	000 m. tons	19.2	8.7	14.3	14.4	14.5	16.0	14.6	15.1	16.5	15.2
Pig Iron ...	,,	32.3	4.7	12.1	16.1	19.2	33.6	34.9	39.4	40.1	36.5
Steel ...	,,	54.1	15.6	31.2	29.4	28.7	38.4	34.4	34.2	36.8	35.8
Cement	,,	35.4	30.6	28.1	30.9	32.4	30.4	24.4	27.3	29.8	22.2
Glass ...	000 sq. m.	...	...	286.3	248.7	236.3	222.3	241.8	...	...	251.2
Cost of living[1]	Ap. '38=100	...	161	216	238	239	332	384	435	445	451
Imports ...	000 Schillgs.	121.1	31.7	88.1	94.4	98.3	112.3	112.2	123.7	135.8	...
Exports ...	,,	101.4	18.3	46.0	64.2	74.7	71.7	68.6	75.4	102.9	...

Source: Monthly Bulletin of Austrian Statistics (British Element).

[1] In Vienna.

ERRATA.

BULLETIN, Vol. IV, No. 9 (September 1947) : p. 297, line 1, for ' 3-week ' ; p. 303, note 4, line 4, for , 1936 ' read ' 1946 '.